

Place your name on the back of this sheet of paper and nowhere else. Staple your answers face up on the front of this sheet of paper. Failure to follow these directions will cost you 10 points. Your assignment will be typed, except graphs can be drawn by hand and mathematical equations can be done by hand. Turn in the Excel file via Canvas. Place your name on an otherwise blank page of the Excel file. Failure to type this assignment will cost you 10 points. If you use double-sided printing or print on the back of scrap paper, I will give you one additional point.

All questions except for Question #1 should be done before class.

This question refers to the spreadsheet "Lab" on the Excel file "[lab8.xlsx](#)." Each date is for the two-month period which starts then. So, "Jan. 2002" is for January and February of 2002.

1A) (40 points) Calculate the columns *Centered Moving Average*, *Preliminary Seasonal Indicator*, *Average Seasonal Indicator*, *Revised Seasonal Factor*, and *Total Seasonal Factor*.

B) (10 points) If the company sales of \$120 in the May and June of this year, what would the seasonally adjusted sales be? If the company did \$600 of sales this year, how much would you expect to be sold in the November and December? For both questions in Part B, do the calculation directly on the spreadsheet and type on the spreadsheet an explanation of what you did.

2) (10 points) According to the web, the current exchange rate between the Belarusian ruble and the US dollar is 3.015 BYN/USD. Suppose that the exchange rate tomorrow became .3USD/BYN. Did the BYN appreciate, depreciate, revalue, or devalue? Show all work and briefly explain what you did.

3) (10 points) According to <https://capital.com/en-int/analysis/currencies-pegged-to-usd>, The Saudi Arabian riyal is pegged to the dollar at 3.75 SAR/USD. Suppose that tomorrow they change it to 0.25 USD/SAR. Did the SAR appreciate, depreciate, revalue or devalue? Show all work and briefly explain what you did. (Interestingly, there foreign exchange markets out of Saudi Arabia where the exchange rate does change some. I believe these are black markets. From what I can tell, the value of the SAR on these exchanges has fluctuated at most 1 penny over the last 5 years. Therefore, Saudi Arabia does not have the problem we will talk about on 4/6.)

4) (15 points) What is the equation for *absolute PPP*? Explain both why it makes sense and why it does not hold.

5) (10 points) What is the equation for *relative PPP*? Explain why it makes sense.